Day Care Center Illness: Policy and Practice in North Carolina

SUZANNE E. LANDIS, MD, MPH, AND JO ANNE L. EARP, ScD

Abstract: We surveyed 62 North Carolina day care centers (DCCs) to determine their policies for excluding children. We found that the addition of a temperature of 100–101°F to each of eight symptoms was associated with an increase in the percentage of DCCs choosing "immediate pick-up." Non-profit centers were more likely to send children home (70 per cent) than for-profit centers (48 per cent). Centers with and without written illness policies did not differ in their management of sick children. (*Am J Public Health* 1988; 78:311–313.)

Introduction

Half of all mothers of children under age three are currently in the labor force and 60 per cent of mothers with children aged three to five years are working.[1] Children's illnesses for which mothers must take off work cost employers anywhere from 5.6 days to 28.8 days per female employee per year.[2–5]

Day care centers (DCCs) traditionally have not allowed children who are thought to be sick to remain at the centers.[6] Exclusion policies range from the infrequent written guidelines to the more common unwritten ones.[7,8]

Little is known about the criteria actually used for excluding children or whether written guidelines are more likely to exist in some types of centers than others. In this study we set out to identify whether an illness policy or specific child and DCC factors were associated with excluding children.

Methods

All licensed day care centers located in three North Carolina counties as of January 1985 were grouped by status of being for-profit or non-profit centers.* Twenty nine of 105 for-profit centers were randomly selected and combined with all 33 non-profit centers not previously used in the pretest to comprise the 62 day care centers in this study.

During a prearranged visit to each center by the first author, each of the 347 DCC staff members was asked to complete a self-administered questionnaire about characteristics thought to influence the DCC's decisions to send children home: presence and content of an illness policy and child's age, temperature, and symptoms/signs.

DCCs provided us with a copy of their illness policies, if written. The policies were reviewed and sorted according to a classification scheme correlated with questions in the staff's self-administered questionnaire: temperature-dependent; condition-dependent (e.g., "If a child has diarrhea and/or vomiting he will be sent home from school"); both temperature and condition-specific; non-specific or behavioral (e.g., "If a child needs special care because of signs of illness, the child should not be brought to the center").

DCC staff were asked closed-ended questions about how they would handle day care children of two ages (less than 24 months and 2 to 5 years), five temperature levels (ranging from normal to above 102°F), and several symptoms/signs of common childhood conditions: new runny nose; new cough; unusually cranky; ear pain; sore throat; diarrhea; conjunctivitis; skin rash. An example of one question is "When a child between 2 and 5 years of age has the following problem and no fever, do you: Do nothing; tell parent at end of day; call parent to tell them; call parent for immediate pick-up?" (Due to lack of center space, isolation was not a feasible option.) For each child's temperature level, age group, and symptom/sign, staff indicated how they would handle the situation.

We determined the proportion of staff within each DCC, and then within each profit-grouping, who chose "call the parent for immediate pick-up" (the most socially and economically disruptive option to parents and employers); we then compared non-profit and for-profit centers for each condition. The staff responses were averaged for their respective DCCs. We analyzed the data, using DCC as the unit of analysis, by the Wilcoxon rank sum test.[9]

Results

Overall, 54 of 62 centers (87 per cent) and 302 of 347 staff (87 per cent) completed the questionnaires [21 of 29 for-profit centers (72 per cent) and 82 per cent of their staff; 33 of 33 non-profit centers (100 per cent) and 91 per cent of their staff]. Nearly all of the staff in the responding centers participated. Eight centers declined to participate. Non-respondent centers generally were located in lower socioeconomic areas; non-respondent staff were similar to respondents in age, education and race.

The day care staff from non-profit centers, as compared to those from for-profit centers, were more likely to be: Black (48 per cent versus 39 per cent); 28 years or older (60 per cent versus 42 per cent); college graduates (46 per cent versus 22 per cent); and more experienced in day care work (58 per cent versus 46 per cent). The staff from the two DCC groups did not differ in their average level of infectious disease training, marital status, gross family income, or number of own children of various ages.

As reported by their staff, 36 per cent of the for-profit centers considered 99°F a fever, while 42 per cent considered 100°F a fever; similar figures were reported for non-profit centers. As the temperature increased more centers sent children home (Figure 1).

Regardless of age, the specific symptom/sign was also an important factor in the decision to send children home from the center; diarrhea (67 per cent) and conjunctivitis (65 per cent) were the two signs which prompted more centers to call parents for "immediate pick-up" than any others, regardless of temperature (Figure 2).

Non-profit centers sent children home more frequently for temperatures of 100°F–100.9°F (45 per cent) and for

*Differences between for-profit and non-profit day care centers may be briefly described as follows: for-profit DCCs are commercial operations, supported by the fees charged to users, whereas non-profit DCCs are often subsidized by a church or community group.

Address reprint requests to Jo Anne L. Earp, ScD, Associate Professor, Department of Health Education, Rosenau Hall 7400, School of Public Health, University of North Carolina, Chapel Hill, NC 27599. At the time of the study, Dr. Landis was with the Clinical Scholars Program, Department of Epidemiology, UNCSPH, Chapel Hill. This paper, submitted to the Journal August 6, 1986, was revised and accepted for publication August 18, 1987.

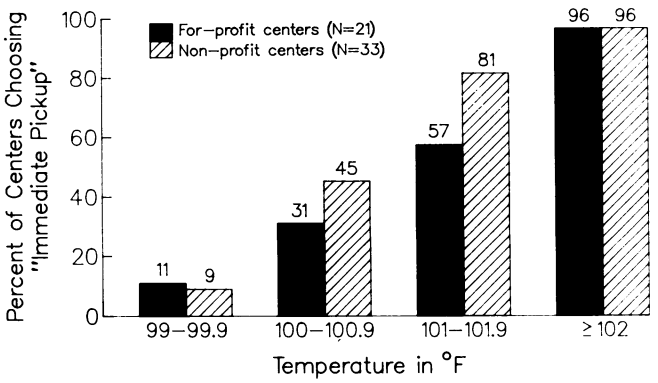

FIGURE 1—Percentage of Day Care Centers Choosing Immediate Pick-up by Level of Child's Temperature for Children Ages 2 to 5 Years, North Carolina.

temperatures of 101°F–101.9°F (81 per cent) than for-profit centers (31 and 57 per cent, respectively) (Figure 1). Non-profit centers were more likely to choose "immediate pick-up" than for-profit centers for seven of the eight symptoms/signs, when children's age and temperature were controlled (data not shown; available on request to authors).

Three of 21 (14 per cent) for-profit centers had written illness policies, compared to 18 of 33 (55 per cent) non-profit centers. The non-profit centers were more likely to list specific exclusionary criteria for sick children than were for-profit centers (Table 1). Even so, very few non-profit centers had policies addressing *both* specific temperature levels and conditions for exclusion. Within both types of centers, those without written policies acted similarly to those with policies for any combination of child's age, temperature, and symptoms/signs (data available on request to authors).

Discussion

Presumably the level of body temperature is a major indicator for sending sick children home from day care because parents and staff fear fever and/or misunderstand the biological reasons for, or the consequences of, it.[9,10] In addition, fever is an objective sign that can be easily documented, unlike ear pain or cranky behavior.

Why, in the absence of any fever, diarrhea and conjunctivitis were the problems of greatest concern is less

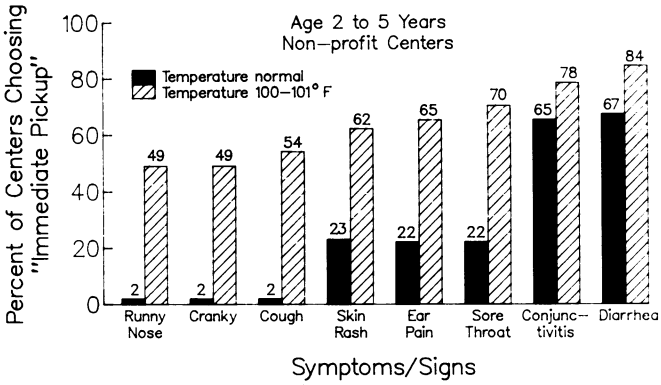

FIGURE 2—Percentage of Non-profit Day Care Centers Choosing Immediate Pick-up by Symptoms and Signs of Illness for Children Ages 2 to 5 Years, North Carolina.

TABLE 1—Type of Illness Policy by Type of Day Care Center

Type of Illness Policy	Type of Center: % For-Profit (N = 21)	% Non-Profit (N = 33)
No Written Policy	86 (18)	45 (15)
Nonspecific Policy	9 (2)	15 (5)
Temperature-dependent Policy	0	3 (1)
Condition-dependent Policy	5 (1)	18 (6)
Temperature and Condition-dependent Policy	0	18 (6)
Total	100% (21)	100% (33)

N shown in parentheses

easy to understand since respiratory symptoms could also reflect potential contagion. However, a child with diarrhea often requires extra attention, thereby reducing staff time with other well children; a child with conjunctivitis may worry the staff more than the everyday occurrence of a child with mild respiratory symptoms.

Non-profit centers without written policies appear to act in a more conservative manner when compared with the for-profit centers without written policies. This variation could be related to several different factors. Among them is the fact that although mothers from non-profit and for-profit centers worked full-time (85 per cent), mothers from non-profit centers were more likely to have professional type jobs which might allow them more flexible working schedules (unpublished observations, authors).

Staff from some centers with a written policy of excluding children with temperatures of 100°F reported not sending such children home, indicating this particular written policy is not always adhered to. Some centers with no written policies reported excluding children with 100°F temperatures, suggesting considerable variability in responses to temperatures whether or not written policies existed.

DCCs were reported as excluding almost all children with diarrhea and conjunctivitis regardless of the type of illness policy they had. When children had coughs, runny noses, or were cranky, very few centers reported they would exclude them; no written illness policy examined in this study suggested that children with these symptoms should be sent home, unless the symptom was associated with a fever. Ear pain, sore throat, and skin rash were not commonly included in policies as symptoms for exclusion; DCC staff presumably had to use their own judgment as to when to exclude or not to exclude these children.

Having a standard illness policy is probably a useful practice for DCCs. It can serve as a guide for parents and physicians about those circumstances in which DCCs are more likely to exclude sick children. Furthermore, written policies give DCC staff documentation for their actions and may help DCC boards plan alternate forms of sick child care more easily. However, written policies are of little value if they are not understood or adhered to by DCC staff.

ACKNOWLEDGMENTS

The authors wish to acknowledge Tammy Jenkins for her help in interviewing and Eliana Marques for her help with the data analyses.

This work was supported by the Robert Wood Johnson Clinical Scholars Program and was presented at the APHA 114th annual meeting in Las Vegas, Nevada, September 1986.

REFERENCES

1. US Dept of Labor: Labor force activity of mothers of young children continues at record pace. Bureau of Labor Statistics News 1985; USDL no. 85-381:1-8.
2. Carpenter ES: Children's health care and the changing role of women. Med Care 1980; 18:1208-1218.
3. Strangert K: Respiratory illness in preschool children with different forms of day care. Pediatrics 1976; 57:191-196.
4. Doyle AB: Incidences of illness in early group and family day care. Pediatrics 1976; 58:607-613.
5. US Bureau of the Census: Statistical Abstract of the United States: 1986 (106th Ed.) Washington, DC: The Bureau, 1985.
6. Fredericks B, Hardman R, Morgan G, Rodgers F: A little bit under the weather: A look at care for mildly ill children. Boston: Work/Family Direction, Inc. 1986.
7. Landis SE, Earp JA: Day care center illness policies: A time for change? NC Med J 1986; 47:361-362.
8. Shapiro ED, Kuritsly J, Potter J: Policies for the exclusion of ill children from group day care: An unresolved dilemma. Rev Infect Dis 1986; 8:622-625.
9. Schmitt BD: Fever phobia. Am J Dis Child 1980; 134:176-181.
10. Kramer MS, Naimark L, Leduc DG: Parental fever phobia and its correlates. Pediatrics 1985; 75:1110-1113.

Schedule, Procedures for Submission of Proposed APHA Policy Statements

The American Public Health Association has announced its schedule and guidelines for submitting proposed policy statements for consideration during 1988. The policy development process is designed to be open to full participation of the APHA membership, and to ensure careful review by appropriate APHA units. The basic idea of a resolution or position paper may arise from any member or unit of the Association. By definition, a *resolution* is a focused statement, no more than 500 words, of a specific action or series of actions endorsed by the Association; a *position paper* is a major exposition, not to exceed 3,000 words, of the Association's viewpoint on a broader issue affecting the public's health.

Resolutions may be submitted by APHA sections, chairpersons of section committees, Governing Council members, officers of affiliated associations, or individual members. Members are urged to submit proposed resolutions to appropriate sections or units of APHA for their review and advice prior to submission to the Association.

Position Papers **must** be submitted by a body authorized in the Constitution and By-Laws of the Association, or by a caucus recognized as being in official relations with APHA, or by a Special Primary Interest Group (SPIG).

For both resolutions *and* position papers, one individual should be designated to represent the submitting APHA component, in order to receive copies of comments, assure that revisions are made, and follow-up throughout the policy development process.

Specific guidelines and the established formats for the two types of policy statements have been sent to the various APHA components; this information is also available through APHA's Programs Division, 1015 15th Street, NW, Washington, DC 20005 (Tel: 202/789-5600). The following schedule lists the important deadlines for the 1988 policy development process:

March 21	All proposed resolutions and position papers are due at APHA headquarters. They should be sent to the attention of the Joint Policy Committee (JPC).
May 2–3	The JPC meets in Washington, DC to evaluate each proposed policy statement. (Between March 21 and May 2, members of four reference committees review each proposed policy statement. Appropriate section chairpersons, SPIGs, and selected individuals are also asked to review related proposed policy statements.)
May 13	Proposed policy statements are returned to authors with an initial assessment by the JPC, and requested revisions, where appropriate.
June 24	Revised policy statements to be considered by the 1988 Governing Council must be returned to APHA headquarters by this date.
September	Proposed policy statements are published in *The Nation's Health*; copies are mailed to members of the Governing Council
November 13	Annual Meeting: "Late-Breakers"—Submission deadline 6:00 pm (Sunday), for "late-breaking events." The chairpersons of the public hearings will be instructed that only those policy statements which address issues that have arisen between March 21 and the Annual Meeting will be considered as late-breaking events.
November 14	Annual Meeting: Public Hearings are conducted by the Reference Committees.
November 15	Annual Meeting: Joint Policy Committee meets to develop final recommendations for presentation of proposed resolutions and position papers to the Governing Council on Wednesday.
November 16	Annual Meeting: Governing Council votes on proposed policy statements.

Adopted public policy statements will be published in the February issue of the *American Journal of Public Health*. A cumulative looseleaf collection of APHA Public Policy Statements (1948 to present) is available through APHA Publication Sales Division (same address as above).